NORMAL VELOCITY OF GAS FLOW UNDER INVERTED WIER

B = 5 m 00 = width of furnace, corresponding to length of weir.

ſc.=	*1* mOO	0 m 75	0 m 50	0 m 30
A =	3 . 53	3 . 54	3 . 57	3.62
t	Velocity, Meters per Second —v			
500°	3.386	2.908	2.344	1.778
600°	3.709	3.185	2.568	1.948
700°	4.006	3.440	2.774	2.104
800°	4.283	3.678	2.965	2.249
900°	4.543	3.901	3.145	2.386
1000°	4.788	4.112	3.315	2.515
1100°	5.022	4.312	3.477	2.638
1200°	5.246	4.504	3.631	2.755
1300°	5.460	4.688	3.779	2.86
1400°	5.666	4.865	3.923	2.976
1500°	5.864	5.036	4.060	3.080
1600°	6.057	5.201	4.193	3.181
1700°	6.243	5.361	4.322	3.279
1800°	6.424	5.516	4.448	3.374
Qt=	5.00?;	3.75?;	*2.50v*	1.50v

for the drop in temperature of the gases per second. The method of determining the rate of the drop in temperature is as follows:

The difference between the theoretical calorific intensity, or temperature, of the combustible and the temperature of the products of combustion leaving the heated zone is divided by the time in seconds which the products of combustion remain in the heated zone. This gives the average drop in temperature of the gases per second.

For open-hearth furnaces this drop in temperature has been found to be from 200° to 250° and for large brick kilns with a spherical roof—down draft—from 70° to 80° per second.

Therefore, taking 1500° as the temperature produced by the combustion of a coal with an air supply 1.50 times the theoretical requirements, and 600° as the temperature of the products of com-